

24XSTREAM

WIRELESS MODEM

2.4 GHz for Worldwide Applications

Designed for international markets, this compact data transceiver is perfect for OEMs needing high performance and dependable operation.

The 24XStream wireless modem transfers data at 9600 or 19200 baud up to 1/4 mile in a city environment or greater than 3 miles line-of-sight with a directional antenna.

This radio is perfect for applications in supervisory control and data acquisition (SCADA), remote meter reading, home automation, security, instrument monitoring, point of sale systems (POS) and a myriad of other applications.

The 24XStream transceiver modules have built-in support for multi-drop networking protocols. Multiple independent networks can operate in the same vicinity by using distinct network identifiers.

The radios integrate quickly and seamlessly into any new or existing design. Simply output serial data from any microcontroller or RS-232 (422/485) into the radio to send FCC-approved, frequency hopping spread spectrum data

through the air and capture it on all receivers within range on the same network. The system behaves as a virtual half-duplex parallel-wired network.

As a member of the XStream product family, the 24XStream utilizes the same form factor as the 9XStream wireless modem modules. Identical form factors provide a level of versatility not allowed by other manufacturers. For example, applications designed for the 900 MHz North American markets can easily be designed to operate in the 2.4 GHz Asian and European markets by exchanging 9XStream modules with 24XStream modules.

Features

- Best sensitivity in the industry for low cost and extended transmission range.
- Low power consumption. Suitable for battery powered applications.
- Small size.
- Easy to integrate. No knowledge of RF necessary Simple networking protocol.
- Standard serial digital interface. Interfaces with any microcontroller.
- Reliable data transfer performance.
- Choice of on-board or external antennas.
- FCC-approved so no further licensing required

MaxStream
Exceeding your wireless expectations.

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General

Radio Frequency	2.4000-2.4835 GHz, unlicensed ISM band
Type	Frequency Hopping Spread Spectrum Transceiver
Frequency Control	Direct FM
Network Topology	Point-Multipoint and Point-to-Point Multi-Drop Transparent Networking
Channel Capacity	65,000 Network Identifiers share 25 hop channels
Serial Data Interface	Asynchronous serial CMOS signals, 5V
I/O Data Rate	Software selectable 2400-57,600 bps, 1200 bps available

Performance

	24XSTREAM-96	24XSTREAM-192
RF Baud Rate	10,000 bps	20,000 bps
Data Throughput	9600 bps	19200 bps
Transmit Power Output	nominal	nominal
Rx Sensitivity	-104 dBm	-101 dBm
Range*	Indoor: 300' to 750' Outdoor: 3 mi. with dipole, >12 Mi. with gain antenna	

*Range calculations are for 9600 baud radio, line-of-sight. Actual range will vary based upon specific board integration, antenna selection, environment and the OEM's device.

Power Requirements

Supply Voltage	5 VDC, +/-0.3V
Current Consumption	Tx 240 mA, Rx 60 mA, Power Down <10 μ A

Physical Properties

Board Size	1.6" x 2.8.25" x .35" (4.06 x 6.86 x 0.89)cm
Weight	0.8 oz. (24 g)
Connector	11 pin & 4 pin 0.1" spaced male Berg type headers
Operating Temperature	0°C to 70°C (-40°C to 85°C available)
Operating Humidity	10% to 90% (non-condensing)

Antenna

Antenna Connector	Reverse-polarity SMA or MMCX
Antenna Impedance	50 ohms unbalanced
Approved Antennas	Integral wire antenna (factory installed), 1.2 dBi gain 1/4 & 1/2 wave flexible whip, high-gain yagi & base station antennas

Certification

United States	FCC ID: OUR-24XSTREAM
Canada	# 4214A 12008
Europe	CE, ETSI

Mechanical Overview

Connector Pinout:

Pin	Signal	Type	Description
1	CTS	Output	Clear to send Flow control
2	PwrDn	Input	Power Down
3	RX	Output	Receive Data
4	TX	Input	Transmit Data
5	NC	-	Reserved
6	*Reset	Input	Reset radio (assert low to reset)
7-9	NC	-	Reserved
10	Vcc	Input	5 VDC, +/-0.3V (regulated)
11	Gnd	-	Signal and chassis ground

Ordering Information

Part Number	Description
X24-009	9600 baud transceiver
X24-019	19.2 kbaud transceiver

